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10/563,680

02/22/2007

Pieter Gerard Maclaine Pont

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WOOD, PHILLIPS, KATZ, CLARK & MORTIMER

500 W. MADISON STREET

SUITE 3800

CHICAGO, IL 60661

EXAMINER

ANDLER, MICHAEL S

ART UNIT

PAPER NUMBER

2876

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/563,680

Applicant(s)

MACLAINE PONT, PIETER
GERARD

Examiner

Michael Andler

Art Unit

2876

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 April 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 43-82 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 43-82 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>6 January 2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The examiner acknowledges and has entered the preliminary amendment filed on 26 September 2007. Claims **1-42** are cancelled by this amendment. Claims **43-82** are currently pending.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

a) Claims **43-46, 49-62**, drawn to a system, related method claims **63-64, 67-76 and 78**, and related program claims **81-82** are rejected under 35 U.S.C. 102(e) as being anticipated by Jacobs et al. (US 2003/0042305).

Regarding claims **43, 63 and 81-82**, Jacobs et al. discloses an electronic voting system for collecting and counting votes from individual voters using electronic polling equipment in an election comprising a list of subjects to be elected, wherein a vote of an individual voter comprises an election of one of a group including:

- one subject of said list, in an election of a single subject, and
- one combination of subjects of said list, in an election of a combination of subjects, wherein said votes being forwarded by means of a data network, said electronic voting system comprising:

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- means for generating a unique personal key for each individual voter entitled to said election, which unique personal key is to be communicated to said individual voter (Section 0035);

- means for generating one of a group including:

- a unique subject code for each subject on said list, in an election of a single subject, and - a unique subject combination code for each combination of subjects on said list, in an election of a combination of subjects (Section 0026);

- means for generating a reference election record for each individual voter comprising all potential virtual ballot forms for said individual voter, by calculating a unique voter identity code for said individual voter from a unique election code for said election and said unique personal key of said voter (Section 0052 and 0054), and by calculating one of a group including:

- a unique subject identity code for each subject on said list, from each unique subject code and said unique personal key of said voter, in an election of a single subject, and - a unique subject combination identity code for each combination of subjects on said list from each unique subject combination code and said unique personal key of said voter, in an election of a combination of subjects (Section 0052),

and wherein said calculated identity codes form part of said virtual ballot forms (Fig 4);

- means for storing said reference election records for said individual voters (Fig 2 and section 0063);

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- means for loading a tool in said polling equipment of said individual voter wherein said tool comprises means for calculating said unique voter identity code of said voter from said unique election code and said unique personal key communicated to said voter (Sections 0035-0036 and 0061), for calculating one of a group including:

- a unique subject identity code of a subject elected by said voter, from said unique subject code of said subject elected by said voter and said unique personal key of said voter, in an election of a single subject, and - a unique subject combination identity code for the combination of subjects elected by said voter, from said unique subject combination code for said combination of subjects elected by said voter and said unique personal key of said voter, in an election of a combination of subjects (Section 0052), and

for generating a virtual ballot form comprising said calculated identity code, using said polling equipment (Fig 4 and section 0063);

- means for forwarding said virtual ballot form by said polling equipment over said data network (Section 0023, 0029-0030 and 0040);

- means for receiving and collecting said virtual ballot form forwarded by said polling equipment (Section 0042);

- means for verifying each collected virtual ballot form with respect to its presence in said reference election records of said voters (Section 0063);

- means for counting votes (Fig 2: item 16 and section 0006) and

- means for establishing an election result (Section 0002), and

- validating means for validating votes from said collected virtual ballot forms, which validating means are arranged in such way that from a collection of at least two virtual ballot forms associated with an identical voter identity code, one virtual ballot form of said collection is validated as one valid vote of said voter and remaining virtual ballot forms of said collection are marked as duplicate if said virtual ballot forms of said collection are identical as to one of a group including (See section 0010-0012 which teaches rejecting any paper or electronic votes received after reception of the closing identifier including both duplicate or other votes):

- said subject elected by said voter, in an election of a single subject, and - said combination of subjects elected by said voter in an election of a combination of subjects (Sections 0010-0012), and

all virtual ballot forms of said collection are marked invalid if said virtual ballot forms of said collection are not identical as to one of a group including:

- said subject elected by said voter, in an election of a single subject, and - said combination of subjects elected by said voter in an election of a combination of subjects (See section 0013 which teaches rejecting any votes received prior to receiving an opening identifier).

Regarding claim **44**, Jacobs et al. discloses wherein said validating means form part of said means for verifying said collected virtual ballot forms (See Fig 2 and sections 0010-0012).

Regarding claim **45**, Jacobs et al. discloses wherein said validating means form part of said means for counting said votes (See Fig 2 and sections 0010-0012).

Regarding claims **46 and 64**, Jacobs et al. discloses means for generating a receipt indicating that a virtual ballot form has been received from said polling equipment of said voter and means for delivering said receipt comprising a unique receipt confirmation value in readable form at said polling equipment of said voter (Section 0012).

Regarding claims **49 and 67**, Jacobs et al. discloses means for generating and storing a reference service identity code for each individual voter entitled to said election, which reference service identity code is calculated from a fixed part of said unique personal key of said voter and information related to said election and means for keeping a status record of said voter at said means for receiving and collecting of said virtual ballot forms, wherein said status record is associated with said reference service identity code of said voter (See sections 0036 and 0063 which teaches an ICD identity encoded with the digital signature/key stored in the ICD).

Regarding claims **50 and 68**, Jacobs et al. discloses wherein said tool to be loaded in said polling equipment of said voter is arranged for calculating a service identity code from a fixed part of said unique personal key of said voter and information related to said election and for forwarding said service identity code to said means for receiving and collecting said virtual ballot forms (See sections 0036 and 0063 which teaches an ICD identity encoded with the digital signature/key stored in the ICD).

Regarding claims **51 and 75**, Jacobs et al. discloses communication means for communicating said unique personal key to each individual voter entitled to said election, said communication means comprises at least one of a group including:

- means for electronically storing said unique personal key in a chip card of said voter (Sections 0035-0036),

- data communication means for communicating said unique personal key to said voter by a data network including Internet, a fixed, a mobile data communication network, including a Short Message Service, and

- means for providing said unique personal key on a hard copy in at least one of a human readable form and a machine readable form, including a text message on paper, for communicating by mail to said voter.

Regarding claims **52 and 76**, Jacobs et al. discloses wherein said hard copy is cast as a physical ballot form, further comprising said list of subjects to be elected by said voter (See Fig 4 and section 0052).

Regarding claim **53**, Jacobs et al. discloses wherein said polling equipment is arranged for operatively connecting same to data input means comprising at least one of a group including:

- a chip card reader, - a keyboard, - a mouse, - a screen, - a bar code reader, and - voice conversion means (Section 0061-0062).

Regarding claims **54 and 69**, Jacobs et al. discloses wherein said means for receiving and collecting virtual ballot forms are arranged for receiving and collecting virtual ballot forms other than forwarded by polling equipment of a voter, including physical ballot forms received by mail and converted into virtual ballot forms by automatic ballot form reading and conversion means (Section 0007 and 0059).

Regarding claims **55 and 70**, Jacobs et al. discloses wherein said automatic ballot form reading and conversion are appointed a low value of priority (See section 0059 where a ballot that is invalid for non-electronic voting represents a form of lower priority than electronic voting).

Regarding claims **56 and 71**, Jacobs et al. discloses wherein said means for verification and validating are arranged such that from a collection of at least two virtual ballot forms associated with an identical voter identity code and being collected by means that have been appointed differing values of priority, only virtual ballot forms having a higher value of priority are submitted for verification and validation (See section 0010 where the latest received vote after reception of the opening identifier represents a form of higher priority vote).

Regarding claims **57 and 72**, Jacobs discloses wherein said means for generating one of a group including a unique subject code for each subject on said list, in an election of a single subject, and a unique subject combination code for each combination of subjects on said list, in an election of a combination of subjects; said means for generating a unique voter identity code; and said means for generating a reference election record for each individual voter entitled to said election comprise cryptographic generator and calculator means (See section 0035 and 0066).

Regarding claims **58 and 73**, Jacobs et al. discloses wherein said cryptographic generator and calculator means are arranged for symmetric encryption (See section 0035 where a private key is a form of symmetric encryption).

Regarding claim **59**, Jacobs et al. discloses wherein said means for presenting

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said list of subjects at said polling equipment of a voter; said means for loading said tool in said polling equipment of a voter; said means for receiving and collecting said virtual ballot form forwarded by said polling equipment; and said confirmation means are supported by computer equipment comprising at least one computer server (Sections 0002-0004).

Regarding claim **60**, Jacobs et al. discloses wherein said means for loading said tool in said polling equipment of a voter; said means for receiving and collecting said virtual ballot forms forwarded by said polling equipment; said confirmation means; and said polling equipment are arranged for providing secure data transmission over said data network (Section 0023 and 0030).

Regarding claims **61 and 74**, Jacobs et al. discloses wherein said means for generating a unique personal key for each individual voter; said means for generating said unique voter identity code for each individual voter; said means for generating said unique identity code for one of a group including a unique subject code for each subject on said list, in an election of a single subject, and a unique subject combination code for each combination of subjects on said list, in an election of a combination of subjects; said means for generating said reference election record for each individual voter entitled to said election; said means for verifying a collected virtual ballot form of said individual voter with respect to its presence in said reference election record of said voter; said means for counting votes of said voters; said means for validating votes from said collected virtual ballot forms; and said means for establishing an election result based on said counted votes are supported by computer equipment arranged to be

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operated under the supervision of an election authority (Section 0032).

Regarding claims **62 and 78**, Jacobs et al. discloses wherein said polling equipment comprises at least one of a group including:

- a personal computer arranged for providing access to said data network (Sections 0023 and 0041),
- fixed data communication equipment arranged for providing access to said data network, and
- mobile data communication equipment arranged for providing access to said data network.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

a) Claims **47-48**, drawn to a system, and related method claims **65-66** are rejected under 35 U.S.C. 103(a) as being unpatentable over Jacobs et al. (US 2003/0042305) in view of Siebel et al. (US 2002/0091673).

Regarding claims **47-48 and 65-66**, Jacobs et al. discloses all the limitations of claims 43 and 63, respectively, and entry means for each individual voter using said unique personal key for creating a virtual ballot record (Section 0063).

Jacobs et al. suggests an invention for storing voter information in a database (section 0033) and for storing, verifying and counting electronic ballots (See Abstract)

Jacobs et al. does not specifically teach means for publishing a list of voters entitled to said election, said list of subjects to be elected in said election and said reference election records for said individual voters, enabling public inspection before a date of said election, and access means for each individual voter to inspect said reference election record for said individual voter and an account of said virtual ballot form forwarded by said polling equipment of said individual voter;

means for publishing said election result, comprising a record of valid votes as awarded for said collected virtual ballot forms after been submitted for verification and validation, and enabling public inspection.

Seibel et al. discloses means for publishing a list of voters entitled to said election, said list of subjects to be elected in said election and said reference election records for said individual voters, enabling public inspection before a date of said election, and access means for each individual voter to inspect said reference election record for said individual voter and an account of said virtual ballot form forwarded by said polling equipment of said individual voter (See Fig 5 and Abstract);

means for publishing said election result, comprising a record of valid votes as awarded for said collected virtual ballot forms after been submitted for verification and validation, and enabling public inspection (See Abstract).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to modify the teachings of Jacobs et al. with the invention of Seibel

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et al. in order to provide a means of accurately tabulating votes and identifying voter over-votes and under-votes (See Seibel et al, sections 0003-0007).

b) Claim **77** is rejected under 35 U.S.C. 103(a) as being unpatentable over Jacobs et al. (US 2003/0042305) in view of Chung (US 2002/0077886).

Regarding claim **77**, Jacobs et al. discloses all the limitations of claim **63** and wherein a list of unique reserve keys is generated and said reference election record is generated to comprise virtual ballot forms for said number of unique keys (Sections 0052-0054).

Jacobs et al. suggests an invention where individual smart cards carrying unique identifiers are issued to a voter (Section 0035-0036).

Jacobs et al. does not specifically teach wherein a key of said list is issued to a voter who applies for a fresh unique key replacing said unique personal key initially appointed to said voter, wherein said reserve key is appointed to said voter after said initially appointed unique personal key and said corresponding reference election record are withdrawn, and wherein said issue of said reserve key from and said withdrawal of said initially appointed unique personal key are taken into account for the verification of the validity of collected virtual ballot forms.

Chung discloses a key of said list is issued to a voter who applies for a fresh unique key replacing said unique personal key initially appointed to said voter, wherein said reserve key is appointed to said voter after said initially appointed unique personal key and said corresponding reference election record are withdrawn, and wherein said

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issue of said reserve key from and said withdrawal of said initially appointed unique personal key are taken into account for the verification of the validity of collected virtual ballot forms (See section 0103 where a replacement card with a new key represents a form of reserve key).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to modify the teachings of Jacobs et al. with the invention of Chung in order to provide a means of replacing voter smart cards and ballots if they are lost in the mail (See Chung, section 0103).

c) Claim **79** is rejected under 35 U.S.C. 103(a) as being unpatentable over Jacobs et al. (US 2003/0042305) in view of Gibbs et al. (US 6,085,321).

Regarding claim **79**, Jacobs et al. discloses all the limitations of claim **63**, and wherein said data network comprises Internet and said polling equipment comprises a personal computer operatively connected to the Internet and wherein said tool is loaded into said personal computer (See sections 0029, 0037 and 0061).

Jacobs suggests an invention that uses digital signatures to securely transfer messages and download software over the Internet (Sections 0029 and 0035).

Jacobs et al. does not specifically teach wherein said tool is loaded by means of a Java applet included in a web-page to be selected by a voter for participating in said election.

Gibbs et al. discloses wherein said tool is loaded by means of a Java applet included in a web-page to be selected by a voter for participating in said election (Col 10, lines 20-50)

Therefore, it would be obvious to one of ordinary skill in the art at the time of the invention, to modify the teachings of Jacobs et al. with the invention of Gibbs et al. in order to provide a more secure means of voting on the Internet using a unique digital signature (See Gibbs et al., Abstract).

d) Claim **80** is rejected under 35 U.S.C. 103(a) as being unpatentable over Jacobs et al. (US 2003/0042305) in view of Chappuis (US 2005/0240418).

Regarding claim **80**, Jacobs et al. discloses all the limitations of claim 63.

Jacobs et al. suggests an invention for electronically voting on the Internet using a personal computer and a smart card (Sections 0036-0037).

Jacobs et al. does not specifically teach wherein said polling equipment comprises mobile communication equipment having a SIM-card and wherein said tool is loaded in said SIM-card of said mobile communication equipment for participating in said election by a voter using said mobile communication equipment.

Chappuis discloses wherein said polling equipment comprises mobile communication equipment having a SIM-card and wherein said tool is loaded in said SIM-card of said mobile communication equipment for participating in said election by a voter using said mobile communication equipment (See Abstract).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to modify the teachings of Jacobs et al. with the invention of Chappuis in order to provide a more secure means of performing transactions that require authorization from a mobile device (See Chappuis, section 0001).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Andler whose telephone number is (571) 270-5385 and whose e-mail address is michael.andler@uspto.gov. The examiner can normally be reached on Monday-Friday 7:30 AM to 3:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Lee can be reached on (571) 272-2398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael Andler/

/Michael G Lee/

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Examiner, Art Unit 2876

Supervisory Patent Examiner, Art Unit 2876